

FORM PTO-1390 (REV 11-98)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTORNEY'S DOCKET NUMBER P56560PCT
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		U.S. APPLICATION NO. (if known, see 37CFR 1.5) 09/890440	
INTERNATIONAL APPLICATION NO. PCT/KR00/01346	INTERNATIONAL FILING DATE 22 November 2000	PRIORITY DATE CLAIMED 9 December 1999	
TITLE OF INVENTION DRIVING CIRCUIT OF DC MICROWAVE OVEN AND METHOD OF CONTROLLING THE SAME			
APPLICANT(S) FOR DO/EO/US Samsung Electronics Co., Ltd. / Yong-Woon HAN, Seong-Deog JANG, Kwang-Seok KANG, Han-Jun SUNG			
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:			
<p>1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.</p> <p>2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.</p> <p>3. <input type="checkbox"/> This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 29(1).</p> <p>4. <input type="checkbox"/> A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.</p> <p>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2)) <ul style="list-style-type: none"> a. <input type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau). b. <input checked="" type="checkbox"/> has been transmitted by the International Bureau. c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US). </p> <p>6. <input type="checkbox"/> A translation of the International Application into English (35 U.S.C. 371(c)(2)).</p> <p>7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)) <ul style="list-style-type: none"> a. <input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau). b. <input checked="" type="checkbox"/> have been transmitted by the International Bureau. c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired. d. <input type="checkbox"/> have not been made and will not be made. </p> <p>8. <input type="checkbox"/> A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</p> <p>9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(3)).</p> <p>10. <input type="checkbox"/> A translation of the annexes to the International Preliminary Examination Report under PCT Article 36. (35 U.S.C. 371(c)(5))</p>			
Items 11. to 16. below concern document(s) or information included:			
<p>11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 7.98.</p> <p>12. <input checked="" type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</p> <p>13. <input type="checkbox"/> A FIRST preliminary amendment. <ul style="list-style-type: none"> <input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment. </p> <p>14. <input type="checkbox"/> A substitute specification.</p> <p>15. <input type="checkbox"/> A change of power of attorney and/or address letter.</p> <p>16. <input checked="" type="checkbox"/> Other items or information: <ul style="list-style-type: none"> - International Search Report (PCT/ISA/210); - WO 01/49079 A1 - PTO-1449 - Amendment under PCT Article 19 filed on 25 May 2001 </p>			

U.S. APPLICATION NO. (if known, see 37CFR 1.5) 09/890 440	INTERNATIONAL APPLICATION NO. PCT/KR00/01346	ATTORNEY'S DOCKET NUMBER P56560PCT	
17. <input checked="" type="checkbox"/> The following fees are submitted:		CALCULATIONS PTO USE ONLY	
BASIC NATIONAL FEE (37 CFR 1.492(a) (a)-(5)):			
Neither international preliminary examination fee (37CFR 1.782) nor international search fee (37CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO		\$1,000.00	
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO.....		\$860.00	
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO.....		\$710.00	
International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4).....		\$690.00	
International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Articles 33(1)-(4)		\$100.00	
ENTER APPROPRIATE BASIC FEE AMOUNT =		\$ 1,000.00	
Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).		\$	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE
Total claims	25 -20 =	5	X \$18.00
Independent claims	5 -3 =	2	X \$80.00
MULTIPLE DEPENDENT CLAIMS(S) (if applicable)		X \$270.00	\$
TOTAL OF ABOVE CALCULATIONS =		\$ 1,250.00	
Reduction of $\frac{1}{2}$ for filing by small entity, if applicable. A Small Entity Statement must also be filed (Note 37 CFR 1.9, 1.27, 1.28)		\$	
SUBTOTAL =		\$ 1,250.00	
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f))		\$	
TOTAL NATIONAL FEE =		\$ 1,250.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property		\$ 40.00	
TOTAL FEE ENCLOSED =		\$ 1,290.00	
		Amount to be refunded \$	
		charged \$	
<p>a. <input checked="" type="checkbox"/> A check in the amount of \$ <u>1,290.00</u> to cover the above fees is enclosed. (Checks: #40024 for \$1,250.00 and #40025 for \$40.00)</p> <p>b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>02-4943</u>. A duplicate copy of this sheet is enclosed.</p>			
<p>NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.</p>			
SEND ALL CORRESPONDENCE TO:			
<u>8/1/2001</u> DATE			
 SIGNATURE			
<u>Robert E. Bushnell</u> NAME			
<u>27,774</u> REGISTRATION NUMBER			

DRIVING CIRCUIT OF DC MICROWAVE OVEN AND METHOD OF CONTROLLING THE SAME

BACKGROUND OF THE INVENTION

5 1.Field of the Invention

The present invention relates to a driving circuit of a DC microwave oven and a method of controlling the same, and more particularly to a driving circuit of a DC microwave oven and a method of controlling the same for driving a magnetron through a conversion of a DC voltage into an AC voltage.

10 2.Description of the Prior Art

A general AC microwave oven is adapted to drive a magnetron thereof for generating a microwave through an application of commercial AC voltages of 110~230V.

In the meantime, A DC microwave oven has been developed which may be used in regions outside a town or in transportation of various kinds such as vehicles, ships, airplanes, and the like to which the commercial AC voltages are hardly supplied.

15 In general, the DC microwave oven drives a magnetron thereof by converting a DC voltage outputted from a battery of a DC voltage supply into an AC voltage through an inverter.

20 The DC microwave oven employing a general DC battery of 12V or 24V requires large currents of 30A~100A in order to drive the magnetron thereof. Accordingly, switches, that is, a primary interlock switch operated in association with the openings and closings of the door of the microwave oven and a secondary interlock switch operated in response to the